

Amendments to the Claims

The listing of claims will replace all prior versions, and listings of claims in the application.

1. (Currently Amended) A method for identifying frequently accessed domain names in a ~~customer premises equipment~~ personal computer that includes a memory and a communication interface, the frequently accessed domain names to be provided to a network gateway for use in domain name system caching, comprising the steps of:

(a) searching files in the memory to identify the frequently accessed domain names; and

(b) providing the frequently accessed domain names to the communication interface for transmission to the network gateway over a communication path;

wherein the files in the memory comprise application data files that hold frequently accessed domain names.

2. (Currently Amended) The method of claim 1, wherein the ~~customer premises equipment~~ personal computer runs an operating system, and wherein ~~said searching and said providing~~ steps (a) and (b) are initiated during start-up of ~~said~~ the operating system.

3. (Currently Amended) The method of claim 1, wherein the ~~customer premises equipment~~ personal computer runs an operating system, and wherein ~~said~~

~~searching and said providing steps (a) and (b)~~ are initiated periodically by ~~said the~~ operating system.

4. (Currently Amended) The method of claim 1, wherein ~~said searching and said providing steps (a) and (b)~~ occur in response to the execution of an application by a user of the ~~customer premises equipment~~ personal computer.

5. (Currently Amended) The method of claim 1, wherein ~~said searching files~~ step (a) comprises searching application data files associated with a Web browser application.

6. (Currently Amended) The method of claim 1, wherein ~~said searching files~~ step (a) comprises searching application data files associated with an electronic mail application.

7. (Currently Amended) The method of claim 1, wherein ~~said providing the frequently accessed domain names to the communication interface~~ step (b) comprises packetizing the frequently accessed domain names and providing ~~said the~~ packetized information to the communication interface.

8. (Currently Amended) The method of claim 1, wherein ~~said providing the frequently accessed domain names to the communication interface~~ step (b) comprises

storing the frequently accessed domain names in a management information base and providing ~~said~~ the management information base to the communication interface.

9. (Currently Amended) The method of claim 1, wherein ~~said providing the frequently accessed domain names to the communication interface~~ step (b) comprises generating a domain name system query that includes ~~said~~ the frequently accessed domain name and providing ~~said~~ the domain name system query to the communication interface.

10. (Currently Amended) A method for selectively caching domain name system information on a network gateway that includes a cache, wherein the network gateway is attached to a ~~customer premises equipment~~ personal computer that includes a memory, comprising the steps of:

- (a) searching files in the memory to identify a frequently accessed domain name;
- (b) providing ~~said~~ the frequently accessed domain name from the ~~customer premises equipment~~ personal computer to the network gateway;
- (c) generating, in the gateway, a domain name system query that includes ~~said~~ the frequently accessed domain name;
- (d) transmitting ~~said~~ the domain name system query from the network gateway to a network for resolution;
- (e) receiving, in the gateway, a response to ~~said~~ the domain name system query from ~~said~~ the network that includes ~~said~~ the frequently accessed domain name and a corresponding IP address; and

(f) storing ~~said~~ the frequently accessed domain name and ~~said~~ the corresponding IP address in the cache;

wherein the files in the memory comprise application data files that hold frequently accessed domain names.

11. (Currently Amended) The method of claim 10, wherein the ~~customer premises equipment~~ personal computer runs an operating system, and wherein ~~said searching and said providing~~ steps (a) and (b) are initiated during start-up of ~~said~~ the operating system.

12. (Currently Amended) The method of claim 10, wherein the ~~customer premises equipment~~ personal computer runs an operating system, and wherein ~~said searching and said providing~~ steps (a) and (b) are initiated periodically by ~~said~~ the operating system.

13. (Currently Amended) The method of claim 10, wherein ~~said searching and said providing~~ steps (a) and (b) occur in response to the execution of an application by a user of the ~~customer premises equipment~~ personal computer.

14. (Currently Amended) The method of claim 10, wherein ~~said searching~~ files step (a) comprises searching application data files associated with a Web browser application.

15. (Currently Amended) The method of claim 10, wherein ~~said searching files~~ step (b) comprises searching application data files associated with an electronic mail application.

16. (Currently Amended) The method of claim 10, wherein ~~said providing said frequently accessed domain name to the network gateway~~ step (b) comprises packetizing ~~said the~~ frequently accessed domain name and transmitting ~~said the~~ packetized information to the network gateway.

17. (Currently Amended) The method of claim 10, wherein ~~said providing said frequently accessed domain name to the network gateway~~ step (b) comprises storing ~~said the~~ frequently accessed domain name in a management information base and providing ~~said the~~ management information base to the network gateway.

18. (Currently Amended) The method of claim 10, wherein ~~said transmitting said domain name system query from the network gateway to a network for resolution~~ step (d) comprises transmitting ~~said the~~ domain name system query to a domain name server on ~~said the~~ network for resolution.

19. (Currently Amended) The method of claim 10, wherein ~~said generating a domain name system query~~ step (c) comprises generating a domain name system query in accordance with an iterative resolution protocol.

20. (Currently Amended) The method of claim 10, further comprising:

(g) receiving, in the network gateway, a domain name system query from the ~~customer premises equipment~~ personal computer; and

(h) resolving, in the network gateway, ~~said the~~ the domain name system query from the ~~customer premises equipment~~ personal computer using a domain name and corresponding IP address stored in the cache.

21. (Currently Amended) A method for selectively caching domain name system information on a network gateway that includes a cache, wherein the network gateway is attached to a ~~customer premises equipment~~ personal computer that includes a memory, comprising the steps of:

(a) searching files in the memory to identify a frequently accessed domain name;

(b) generating, in the ~~customer premises equipment~~ personal computer, a domain name system query that includes ~~said the~~ the frequently accessed domain name;

(c) providing ~~said the~~ the domain name system query from the ~~customer premises equipment~~ personal computer to the network gateway;

(d) transmitting ~~said the~~ the domain name system query from the network gateway to a network for resolution;

(e) receiving, in the gateway, a response to ~~said the~~ the domain name system query from ~~said the~~ the network that includes ~~said the~~ the frequently accessed domain name and a corresponding IP address; and

(f) storing ~~said the~~ the frequently accessed domain name and ~~said the~~ the corresponding IP address in the cache;

wherein the files in the memory comprise application data files that hold frequently accessed domain names.

22. (Currently Amended) A ~~customer premises equipment~~ personal computer, comprising:

a memory that stores files, wherein the files comprise application data files that hold frequently accessed domain names;

a communication interface for transmitting information to a network gateway;
and

a processor coupled to ~~said~~ the memory and ~~said~~ the communication interface;
wherein said processor is configured to search ~~said~~ the files in the memory to identify frequently accessed domain names and to provide ~~said~~ the frequently accessed domain names to ~~said~~ the communication interface for transmission to ~~said~~ the network gateway.

23. (Currently Amended) The ~~customer premises equipment~~ personal computer of claim 22, wherein ~~said~~ the memory comprises a hard disk drive.

24. (Currently Amended) The ~~customer premises equipment~~ personal computer of claim 22, wherein ~~said~~ the communication interface is a home phoneline network interface, an Ethernet interface or a Universal Serial Bus interface.

25. (Currently Amended) The ~~customer premises equipment~~ personal computer of claim 22, wherein ~~said~~ the application data files are associated with a Web browser application.

26. (Currently Amended) The ~~customer premises equipment~~ personal computer of claim 22, wherein ~~said~~ the application data files are associated with an electronic mail application.

27. (Currently Amended) The ~~customer premises equipment~~ personal computer of claim 22, wherein ~~said~~ the processor is configured to provide ~~said~~ the frequently accessed domain names to ~~said~~ the communication interface by packetizing ~~said~~ the frequently accessed domain names and providing ~~said~~ the packetized information to ~~said~~ the communication interface.

28. (Currently Amended) The ~~customer premises equipment~~ personal computer of claim 22, wherein ~~said~~ the processor is configured to provide ~~said~~ the frequently accessed domain names to ~~said~~ the communication interface by storing ~~said~~ the frequently accessed domain names in a management information base and providing ~~said~~ the management information base to ~~said~~ the communication interface.

29. (Currently Amended) The ~~customer premises equipment~~ personal computer of claim 22, wherein ~~said~~ the processor is configured to provide ~~said~~ the frequently accessed domain names to ~~said~~ the communication interface by generating a

domain name system query that includes ~~said~~ the frequently accessed domain name and providing ~~said~~ the domain name system query to ~~said~~ the communication interface.

30. (Currently Amended) A system for selectively caching domain name system information in a network gateway, comprising:

a ~~customer premises equipment (CPE)~~ personal computer (PC) including a memory that stores files, a communication interface for transmitting information over a communication path, and a ~~CPE~~ PC processor coupled to ~~said~~ the memory and ~~said~~ the communication interface, wherein ~~said~~ the ~~CPE~~ PC processor is configured to search ~~said~~ the files to identify a frequently accessed domain name and to provide ~~said~~ the frequently accessed domain name to ~~said~~ the communication interface for transmission over ~~said~~ the communication path; and

a network gateway including a cache, a ~~CPE~~ PC interface for receiving information over ~~said~~ the communication path, a network interface for transmitting information over a network, and a gateway processor coupled to ~~said~~ the cache, ~~said~~ the ~~CPE~~ PC interface, and ~~said~~ the network interface, ~~said~~ the gateway processor configured to receive ~~said~~ the frequently accessed domain name from ~~said~~ the communication path via ~~said~~ the ~~CPE~~ PC interface, to generate a domain name system query that includes ~~said~~ the frequently accessed domain name, to provide ~~said~~ the query to ~~said~~ the network interface for transmission to a network for resolution, to receive a response to ~~said~~ the query from ~~said~~ the network via ~~said~~ the network interface that includes ~~said~~ the frequently accessed domain name and a corresponding IP address, and to store ~~said~~ the

frequently accessed domain name and ~~said~~ the corresponding IP address in ~~said~~ the cache;

wherein the files in the memory comprise application data files that hold frequently accessed domain names.

31. (Currently Amended) The system of claim 30, wherein ~~said~~ the memory in ~~said customer premises equipment~~ the personal computer comprises a hard disk drive.

32. (Currently Amended) The system of claim 30, wherein ~~said~~ the communication path is a home phoneline network, an Ethernet, or a Universal Serial Bus.

33. (Currently Amended) The system of claim 30, wherein ~~said~~ the application data files are associated with a Web browser application.

34. (Currently Amended) The system of claim 30, wherein ~~said~~ the application data files are associated with an electronic mail application.

35. (Currently Amended) The system of claim 30, wherein ~~said CPE~~ the PC processor is configured to provide ~~said~~ the frequently accessed domain name to ~~said~~ the communication interface by packetizing ~~said~~ the frequently accessed domain name and providing ~~said~~ the packetized information to said communication interface.

36. (Currently Amended) The system of claim 30, wherein ~~said CPE~~ the PC processor is configured to provide ~~said the~~ frequently accessed domain name to ~~said the~~ communication interface by storing ~~said the~~ frequently accessed domain name in a management information base and providing ~~said the~~ management information base to ~~said the~~ communication interface.

37. (Currently Amended) The system of claim 30, wherein ~~said the~~ network interface transmits ~~said the~~ query to a domain name server on ~~said the~~ network for resolution.

38. (Currently Amended) The system of claim 30, wherein ~~said the~~ gateway processor is configured to generate ~~said the~~ domain name system query in accordance with an iterative resolution protocol.

39. (Currently Amended) A computer program product comprising a computer useable medium having computer program logic for enabling a processor in a ~~customer premises equipment~~ personal computer to identify frequently accessed domain names to be provided to a network gateway for use in domain name system caching, the ~~customer premises equipment~~ personal computer further including a memory and a communication interface, comprising:

means for enabling the processor to search files in the memory to identify the frequently accessed domain names; and

means for enabling the processor to provide the frequently accessed domain names to the communication interface for transmission to the network gateway;
wherein the files in the memory comprise application data files that hold frequently accessed domain names.

40. (Currently Amended) The computer program product of claim 39, wherein ~~said~~ the application data files ~~for~~ comprise application data files associated with a Web browser application.

41. (Currently Amended) The computer program product of claim 39, wherein ~~said~~ the application data files comprise application data files associated with an electronic mail application.

42. (Currently Amended) The computer program product of claim 39, wherein ~~said~~ the means for enabling the processor to provide the frequently accessed domain names to the communication interface comprises means for enabling the processor to packetize the frequently accessed domain names and provide ~~said~~ the packetized information to the communication interface.

43. (Currently Amended) The computer program product of claim 39, wherein ~~said~~ the means for enabling the processor to provide the frequently accessed domain names to the communication interface comprises means for enabling the

processor to store the frequently accessed domain names in a management information base and provide ~~said~~ the management information base to the communication interface.

44. (Currently Amended) The computer program product of claim 39, wherein ~~said~~ the means for enabling the processor to provide the frequently accessed domain names to the communication interface comprises means for enabling the processor to generate a domain name system query that includes ~~said~~ the frequently accessed domain name and provide ~~said~~ the domain name system query to the communication interface.